

CLAIMS

What is claimed is:

1. A method for synchronizing a measurement in a communication system,
which comprises the steps of:

setting a counter to a preselected start value;

while the value in the counter is not equal to a preselected final value,

at a first connection point of a communication link, transmitting
a first synchronization signal;

at a second connection point of the communication link, receiving
the first synchronization signal;

at the second connection point, transmitting a second
synchronization signal;

at the first connection point, receiving the second synchronization
signal; and

incrementing the value in the counter;

otherwise,

transmitting a test signal at the first connection point when time
equals the reception time of the last transmitted second
synchronization signal at the first connection point plus a first

preselected time interval;

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recording transmissions arriving at the second connection point
beginning when time equals the reception time of the last
transmitted first synchronization signal at the second connection
point plus a second preselected time interval; and

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ceasing to record transmissions arriving at the second connection
point beginning when time equals the reception time of the last
transmitted first synchronization signal at the second connection
point plus a third preselected time interval.

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2. The method as recited in claim 1, providing the first synchronization
signal, second synchronization signal, and the test signal are transmitted
as a series of digitized data packets.

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3. The method as recited in claim 1, providing at least one of the
synchronization signals has a waveform selected from the group
consisting of a pseudo-random pattern and white noise.

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4. The method as recited in claim 3, providing the pseudo-random waveform
is generated via a maximum length sequence (MLS) algorithm.

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5. The method as recited in claim 1, providing the communication system
is a telephone system.

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6. The method as recited in claim 1, providing signals are transmitted using
voice over packet technology.

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7. The method as recited in claim 6, providing the voice over packet

8. The method as recited in claim 1, providing at least one synchronization signal has a duration different from at least one other synchronization signal.

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10 creating a first synchronization signal data packet comprising the
digitized measured value of the first synchronization signal and

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transmitting the first synchronization signal data packet.

14. The method as recited in claim 1, wherein the method step transmitting
the second synchronization signal further comprises the steps of:

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at preselected instances within the duration of the second synchronization
signal,

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measuring a value of the second synchronization signal;

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digitizing the measured value of the second synchronization
signal;

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creating a second synchronization signal data packet comprising
the digitized measured value of the second synchronization signal;

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and

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transmitting the second synchronization signal data packet.

15. The method as recited in claim 1, wherein the method step receiving the
first synchronization signal further comprises the steps of:

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when at least one data packet is detected at the second connection point,

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receiving the data packet;

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extracting a received data packet value from the received data

packet; and

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converting the received data packet value to an analogue signal
value.

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16. The method as recited in claim 1, wherein the method step receiving the
second synchronization signal further comprises the steps of:

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when at least one data packet is detected at the first connection point,

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receiving the data packet;

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extracting a received data packet value from the received data
packet; and

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converting the received data packet value to an analogue signal
value.

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